

# Notice of Allowability

Application No.

09/966,397

Examiner

Jeffrey R. West

Applicant(s)

BLEMEL, KENNETH G.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed April 24, 2007.
2. ☒ The allowed claim(s) is/are 42 and 44-49.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
JEFFREY R. WEST  
EXAMINER -AU 2857

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Kenneth G. Blemel on July 18, 2007.

3. The application has been amended as follows:

In claim 42, line 13, "and stands" has been changed to ---and strands---.

In claim 42, line 22, "tuplets that represent the time of the sample, identity of the sensor, and said parameter values" has been changed to ---tuplets that represent a time of a sample, identity of the sensor, and parameter values---.

In claim 42, line 36, "said sensitized medium" has been changed to ---said strand of sensitized medium---.

In claim 44, line 1, "wherein the algorithms" has been changed to ---further comprising a technique to---.

In claim 45, line 1, "the parameters" has been changed to ---the characteristic parameters---.

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In claim 47, line 1, "when implemented" has been changed to ---further comprising implementing the method---.

In claim 48, line 1, "when implemented with means" has been changed to ---further comprising means---.

### ***Allowable Subject Matter***

4. Claims 42 and 44-49 are considered to be allowable over the art of record because none of the prior art teaches, or suggests, in combination with the claimed method for assessing a health status of a system of conduits, applying, placing, attaching or embedding a monitoring device and sensors consisting of discrete sensors and a multiplicity of strands of sensitized medium along the length of a conduit such that damage inducing factors affect said set of discrete sensors and strands of sensitized medium, determining by a combination of measurement by signal processing and deductive algorithms whether, when, where and to what extent said damage inducing factors have caused damage, periodically monitoring at least a portion of the set of discrete sensors over a first extended period and storing in a digital memory a data tuple containing information concerning said parameters, forming tuples that represent a time of a sample, identity of the sensor, and parameter values, identifying tuples having normal values within a predetermined range, providing an indication of steady state characteristics if said parameter values for at least a predetermined number of tuples are within a first predetermined range, providing a programmed diagnostic algorithm for assessing risk of damage to the set

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of discrete sensors and extent of deterioration and damage to the monitored conduits, providing an algorithm for estimating remaining useful life of the monitored conduits and components, making a test measurement of said strands of sensitized medium for the purpose of determining if said measured characteristic parameters are substantially equal to previously measured characteristic parameters, the possible outcomes being: there is no measurable change to the sensitized medium, there is measurable change to the sensitized medium, and the medium is disrupted, broken, eroded, cut through or dissolved, choosing whether to repeat said step of making a test measurement of said sensitized medium and, if the choice is to repeat, using a deductive algorithm along with any a priori probability information to: process data from said measuring of said multiplicity of sensitized medium into characteristic parameters, determine any change of said characteristic parameters from recorded characteristic parameters, record the characteristic parameters for later use, and choose whether to measure to locate the change, if the choice is to locate, then measure using either direct calculation based on response to a measuring technique, record a measured value and temporal information if available, and using a calculus estimate a degree of damage for each said sensitized media at each recorded point of damage, for each time if temporal information is recorded.

5. Any comments considered necessary by applicant must be submitted no later

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than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

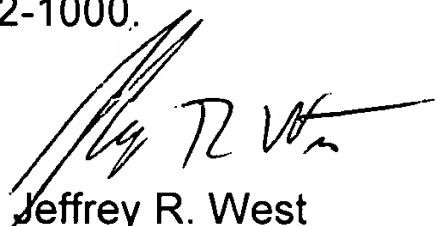
### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeffrey R. West  
Primary Examiner  
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July 23, 2007